

Notice of Allowability

Application No.

10/815,218

Applicant(s)

RAMAIAH ET AL.

Examiner

Arezoo Sherkat

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/18/2006.
2. ☒ The allowed claim(s) is/are 1-14 and 18-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 6/14/06 & 2/21/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance.
9. ☐ Other _____.

Response to Amendment

This office action is responsive to Applicant's amendment received on 5/18/2006.

Claim 1 is amended. Claims 15-17 are cancelled. Claims 18-35 are added.

Response to Arguments

Applicant's arguments, see Remarks – pages 10-13, filed 5/18/2006, with respect to claims 1-14 and 18-35 have been fully considered and are persuasive. The rejection of claims 1-14 has been withdrawn.

Allowable Subject Matter

Claims 1-14 and 18-35 are allowed.

The following is an examiner's statement of reasons for allowance:

The closest prior arts of record, namely Meyer I and Meyer II, alone or in combination fail to disclose sending a corrective acknowledgement message that provides a correct sequence value and acknowledgement value when the false duplicate acknowledge counter is equal to a specified strike factor and only when a TCP retransmission buffer maintained by the receiver is empty. This feature in addition to other limitations of the independent claims 1 and 18-20 render them allowable over the prior art.

Meyer I and Meyer II, taken alone or in combination, does not disclose if the sequence value gap is too large, then performing the steps of: creating and sending a dummy segment carrying a particular sequence value that is just prior to a last properly

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acknowledged sequence value, receiving an acknowledgement of a dummy segment carrying a particular sequence value that is just prior to a least properly acknowledged sequence value, receiving an acknowledgement of the dummy segment, determining whether a second sequence value carried in the acknowledgement is less than a third sequence value of the first TCP segment, and discarding the particular TCP segment from the reassembly buffer when the second sequence value carried in the acknowledgement is less than the third sequence value of the particular TCP segment. Therefore, independent claims 8 and 28-29 are also allowable over the closest prior art of record.

Meyer I discloses that the value of duplicate acknowledgement threshold is preferably adapted on the basis of a variable parameter associated with the flow control of data segments being sent. Such a parameter associated with the flow control of data segments being sent can be the number of data segments in a predetermined category or group, e.g., the number of data units in a given transmission window in the case of a system using window based flow control, or can also be the number of outstanding data units, sent by the sending peer, but for which the sending peer has not yet received an acknowledgement message identifying said data unit or segment as the last correctly received segment of the sequence that was received in the proper order of the sequence (par. 0053-0057).

Meyer I counts all duplicate acknowledgements and responds whenever a duplicate-Ack count/threshold is reached, regardless of the state of the re-transmission buffer. Meyer I does not test whether the re-transmission buffer is empty. Indeed, a re-

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transmitted segment necessarily comes from the re-transmission buffer. Meyer I could not perform such a retransmission if the buffer was empty.

Meyer II discloses wherein the receiver checks whether the received data packet is a retransmission to determine the sending of further requests for retransmissions (par. 0046-0051).

Meyer II determines whether the data packet is a transmission or a retransmission by comparing its sequence number to VRR and VRH (par. 0061-0065). Meyer II however, does not determine whether the sequence value gap is too large to decide whether to perform the steps following such determination as disclosed by the instant application. Sending STATUS messages in Meyer II is an attempt to deal with erroneous retransmissions that fail to fill a previously detected sequence number gap, not a response to a sequence value gap that is too large.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arezoo Sherkat whose telephone number is (571) 272-3796. The examiner can normally be reached on 8:00-4:30 Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A.S.

A. Shukla

Patent Examiner

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August 1, 2006

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